AMENDMENTS TO THE CLAIMS:

The following listing of claims replaces all prior listings, and all prior versions, of claims in the application.

LISTING OF CLAIMS:

1-24. (Cancelled).

25. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 62, wherein:

said abrasive grains have an average particle diameter of 50 nm or less, and said abrasive grains have standard deviation of particle size distribution in a value of more than 5 nm.

26. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 62, wherein said abrasive grains are mixed in an amount of from 0.1% by weight to 5% by weight.

27. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 62, which further comprises a water-soluble polymer, wherein the concentration of the oxidizing agent in the polishing medium is in a range of from 0.01% by weight to 1.8% by weight.

28. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 27, wherein said water-soluble polymer is at least one selected from the group consisting of polyacrylic acid, a polyacrylic acid salt,

polymethacrylic acid, a polymethacrylic acid salt, polyamic acid, a polyamic acid salt, polyacrylamide, polyvinyl alcohol and polyvinylpyrrolidone.

29. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 27, wherein said oxidizing agent is in a concentration of from 0.01% by weight to 1.5% by weight.

30. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 62, wherein said acid is an organic acid.

31. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 30, wherein said acid is at least one selected from malonic acid, malic acid, tartaric acid, glycolic acid and citric acid.

32. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 62, wherein said protective-film-forming agent is at least one selected from benzotriazole and a derivative thereof.

33. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 62, wherein said oxidizing agent is at least one selected from the group consisting of hydrogen peroxide, nitric acid, potassium periodate, hypochlorous acid and ozone water.

34. (Cancelled).

35. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 62, wherein said barrier layer is a barrier layer for preventing copper atoms from diffusing.

36-37. (Cancelled).

38. (Previously Presented) As polishing condition, polishing pressure is 25 kPa and relative speed of substrate member to polishing platen is 18 m/minute, the polishing medium for chemical-mechanical polishing according to claim 59, which has:

a polishing-rate ratio (Ta/Cu) between tantalum and copper or a copper alloy of more than 1;

a polishing-rate ratio (TaN/Cu) between tantalum nitride and copper or a copper alloy of more than 1;

a polishing-rate ratio (Ta/SiO_2) between tantalum and silicon dioxide of more than 10; and

a polishing-rate ratio ($TaN/Si0_2$) between tantalum nitride and silicon dioxide film of more than 10.

39. (Cancelled).

40. (Cancelled).

41. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 62, wherein said abrasive grains are made of colloidal silica or colloidal alumina.

42. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 59, which further comprises a water-soluble polymer.

43. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 42, wherein said water-soluble polymer is at least one selected from the group consisting of polyacrylic acid, a polyacrylic acid salt, polymethacrylic acid, a polymethacrylic acid salt, polyamic acid, a polyamic acid salt, polyacrylamide, polyvinyl alcohol and polyvinylpyrrolidone.

44. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 42, wherein said oxidizing agent is in a concentration of from 0.01% by weight to 1.5% by weight.

45. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 59, wherein said acid is an organic acid.

46. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 45, wherein said acid is at least one selected from malonic acid, malic acid, tartaric acid, glycolic acid and citric acid.

47. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 59, wherein said protective-film-forming agent is at least one selected from benzotriazole and a derivative thereof.

48. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 59, wherein said oxidizing agent is selected from the group consisting of hydrogen peroxide, nitric acid, potassium periodate, hypochlorous acid and ozone water.

49. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 59, wherein said medium has a pH of 2.49 to 2.95.

50. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 62, wherein said medium has a pH of 2.49 to 2.95.

51. (Previously Presented) As polishing condition, polishing pressure is 25 kPa and relative speed of substrate member to polishing platen is 18 m/minute, the polishing medium for chemical-mechanical polishing according to claim 62, which has:

a polishing-rate ratio (Ta/Cu) between tantalum and copper or a copper alloy of more than 1;

a polishing-rate ratio (TaN/Cu) between tantalum nitride and copper or a copper alloy of more than 1;

a polishing-rate ratio (Ta/SiO_2) between tantalum and silicon dioxide of more than 10; and

a polishing-rate ratio (TaN/SiO_2) between tantalum nitride and silicon dioxide film of more than 10.

52. (Cancelled).

53. (Cancelled).

54. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 59, wherein said oxidizing agent has a concentration of 0.15 to 3% by weight.

55. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 59, wherein said oxidizing agent has a concentration of 0.15 to 1.5% by weight.

56. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 62, wherein said oxidizing agent has a concentration of 0.15 to 3% by weight.

57. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 62, wherein said oxidizing agent has a concentration of 0.15 to 1.5% by weight.

58. (Cancelled).

59. (Currently Amended) A polishing medium for chemical-mechanical polishing, ~~adapted to polish a barrier layer of tantalum, a tantalum alloy or a tantalum compound, for a conductor of copper, copper alloy, or copper oxide,~~ comprising:

an oxidizing agent;

a protective-film-forming agent;

an acid; and

water, wherein:

said polishing medium does not include abrasive grains,

said polishing medium has a pH of 3 or less, ~~and~~

said oxidizing agent is in a concentration of from 0.01% by weight to 3% by weight, and

said polishing medium has a property of being capable of polishing a barrier layer of tantalum, a tantalum alloy or a tantalum compound, which is a barrier layer for a conductor of copper, copper alloy or copper oxide.

60. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 59, wherein the polishing medium has a property that a ratio of a polishing rate of the barrier layer using the polishing medium, to a polishing rate of the conductor using the polishing medium, is greater than 1.

61. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 59, wherein said polishing medium includes said oxidizing agent in a concentration of from 0.01% by weight to 1.8% by weight.

62. (Currently Amended) A polishing medium for chemical-mechanical

polishing, ~~adapted to polish a barrier layer of tantalum, a tantalum alloy or a tantalum compound, for a conductor of copper, copper alloy, or copper oxide,~~ comprising:

an oxidizing agent;

a protective-film-forming agent;

abrasive grains;

an acid; and

water, wherein:

said polishing medium has a pH of 3 or less, ~~and~~

said oxidizing agent is in a concentration of from 0.01% by weight to 3% by weight, and

said polishing medium has a property of being capable of polishing a barrier layer of tantalum, a tantalum alloy or a tantalum compound, which is a barrier layer for a conductor of copper, copper alloy or copper oxide.

63. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 62, wherein the polishing medium has a property that a ratio of a polishing rate of the barrier layer using the polishing medium, to a polishing rate of the conductor using the polishing medium, is greater than 1.

64. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 62, wherein said polishing medium includes said oxidizing agent in a concentration of from 0.01% by weight to 1.8% by weight.

65. (Currently Amended) A polishing medium ~~for chemical-mechanical polishing of a surface having at least one of tantalum, tantalum alloy and a tantalum compound,~~ comprising:

an oxidizing agent;

a protective-film-forming agent;

an acid; and

water; wherein:

said polishing medium does not include abrasive grains,

said polishing medium has a pH of 3 or less, ~~and~~

said oxidizing agent is in a concentration of from 0.01% by weight to 3.0% by weight, and

said polishing medium has a property of being capable of chemical-mechanical polishing a surface having at least one of tantalum, a tantalum alloy and a tantalum compound.

66. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 65, wherein said medium has a pH of 2.49 to 2.95.

67. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 65, wherein said oxidizing agent has a concentration of 0.15 to 3.0% by weight.

68. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 65, wherein said oxidizing agent has a concentration of 0.15 to 1.5% by weight.

69. (Currently Amended) A polishing medium for chemical-mechanical polishing of a surface having at least one of tantalum, tantalum alloy and a tantalum compound, comprising:

an oxidizing agent for a conductor;

a protective-film-forming agent for protecting a metal surface;

an acid;

water; and

abrasive grains, wherein:

said polishing medium has a pH of 3 or less; ~~and~~

said oxidizing agent is in a concentration of from 0.01% by weight to 3.0% by weight, and

said polishing medium has a property of being capable of chemical-mechanical polishing a surface having at least one of tantalum, a tantalum alloy and a tantalum compound.

70. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 69, wherein said medium has a pH of 2.49 to 2.95.

71. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 69, wherein said oxidizing agent has a concentration of 0.15 to 3.0% by weight.

72. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 69, wherein said oxidizing agent has a concentration of 0.15 to 1.5% by weight.

73 - 84. (Cancelled).

85. (Currently Amended) A polishing medium for chemical-mechanical polishing, ~~adapted to polish a barrier layer of tantalum, a tantalum alloy or a tantalum compound, for a conductor of copper, copper alloy or copper oxide,~~ comprising:

at least one selected from the group consisting of hydrogen peroxide, nitric acid, potassium periodate, hypochlorous acid and ozone water;

at least one selected from benzotriazole and a derivative thereof;

an acid; and

water, wherein:

said polishing medium does not include abrasive grains,

said polishing medium has a pH of 3 or less, ~~and~~

said oxidizing agent is in a concentration of from 0.01% by weight to 3% by weight, and

said polishing medium has a property of being capable of polishing a barrier layer of tantalum, a tantalum alloy or a tantalum compound, which is a barrier layer for a conductor of copper, copper alloy or copper oxide.

86. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 85, wherein said medium has a pH of 2.49 to 2.95.

87. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 85, wherein said oxidizing agent has a concentration of 0.15 to 3.0% by weight.

88. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 85, wherein said oxidizing agent has a concentration of 0.15 to 1.5% by weight.

89. (Currently Amended) A polishing medium for chemical-mechanical polishing, ~~adapted to polish a barrier layer of tantalum, a tantalum alloy or a tantalum compound, for a conductor of copper, copper alloy or copper oxide,~~ comprising:

at least one selected from the group consisting of hydrogen peroxide, nitric acid, potassium periodate, hypochlorous acid and ozone water;

at least one selected from benzotriazole and a derivative thereof;

abrasive grains;

an acid; and

water, wherein:

said polishing medium has a pH of 3 or less, ~~and~~

said oxidizing agent is in a concentration of from 0.01% by weight to 3% by weight, and

said polishing medium has a property of being capable of polishing a barrier layer of tantalum, a tantalum alloy or a tantalum compound, which is a barrier layer for a conductor of copper, copper alloy or copper oxide.

90. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 89, wherein said medium has a pH of 2.49 to 2.95.

91. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 89, wherein said oxidizing agent has a concentration of 0.15 to 3.0% by weight.

92. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 89, wherein said oxidizing agent has a concentration of 0.15 to 1.5% by weight.

93. (Currently Amended) A polishing medium ~~for chemical-mechanical polishing of a surface having at least one of tantalum, tantalum alloy and a tantalum compound,~~ comprising:

at least one selected from the group consisting of hydrogen peroxide, nitric acid, potassium periodate, hypochlorous acid and ozone water;

at least one selected from benzotriazole and a derivative thereof;

an acid; and

water, wherein:

said polishing medium does not include abrasive grains,

said polishing medium has a pH of 3 or less, ~~and~~

said oxidizing agent is in a concentration of from 0.01% by weight to 3% by weight, and

said polishing medium has a property of being capable of chemical-mechanical polishing a surface having at least one of tantalum, a tantalum alloy and a tantalum compound.

94. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 93, wherein said medium has a pH of 2.49 to 2.95.

95. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 93, wherein said oxidizing agent has a concentration of 0.15% by weight to 3% by weight.

96. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 93, wherein said oxidizing agent has a concentration of 0.15% by weight to 1.5% by weight.

97. (Currently Amended) A polishing medium ~~for chemical-mechanical polishing of a surface having at least one of tantalum, tantalum alloy and a tantalum compound,~~ comprising:

at least one selected from the group consisting of hydrogen peroxide, nitric acid, potassium periodate, hypochlorous acid and ozone water;

at least one selected from benzotriazole and a derivative thereof;

an acid;

water; and

abrasive grains, wherein:

said polishing medium has a pH of 3 or less; ~~and~~

said oxidizing agent is in a concentration of from 0.01% by weight to 3.0% by weight, and

said polishing medium has a property of being capable of polishing a surface having at least one of tantalum, a tantalum alloy and a tantalum compound.

98. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 97, wherein said medium has a pH of 2.49 to 2.95.

99. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 97, wherein said oxidizing agent has a concentration of 0.15 to 3.0% by weight.

100. (Previously Presented) The polishing medium for chemical-mechanical polishing according to claim 97, wherein said oxidizing agent has a concentration of 0.15 to 1.5% by weight.